



PATENT
Docket No.: 2089/102 (MCA-517)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s) : Willem Kools

Serial No. : 10/635,736

Cnfrm. No. : 8844

Filed : August 6, 2003

For : PROCESS OF FORMING MULTILAYERED
STRUCTURES

)
) Examiner:
) Ana M. Fortuna

)
) Art Unit:
) 1723

FOURTH SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT
UNDER 37 CFR §§ 1.97-1.98

Mail Stop: Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Pursuant to 37 CFR §§ 1.97-1.98, applicant hereby brings to the attention of the United States Patent and Trademark Office, the references listed on the attached PTO/SB/08 form. Some of the information (i.e. Reference Cite Nos. 30, 32-33, including translations) contained in the Information Disclosure Statement ("IDS") was first cited in an Office Action (copy of translation enclosed) for the corresponding Japanese Patent Application.

Pursuant to 37 CFR § 1.98(a)(2)(ii), copies of the cited U.S. patents and U.S. patent application publications (i.e., Reference Cite Nos. 1-29) are not enclosed. Copies of the other references cited (i.e. Reference Cite Nos. 30-37) are enclosed herewith.

Pursuant to 37 CFR §§ 1.17(p) and 1.97(c), enclosed is a check to cover the \$180.00 fee. The Commissioner is hereby authorized to charge any additional fees, or credit any overpayment, to Deposit Account No. 14-1138.

Respectfully submitted,

Date:

August 17, 2006

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Laura L. Trost
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Substitute for form 1449, USPTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		Complete if Known			
		Application Number	10/635,736		
		Filing Date	August 6, 2003		
		First Named Inventor	Willem Kools		
		Art Unit	1723		
		Examiner Name	To Be Assigned		
Sheet	1	of	2	Attorney Docket Number	2089/102 (MCA-517)

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	U.S. Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code* (if known)			
	1	US-3,948,823	04-06-1976	Lee et al.	
	2	US-4,340,480	07-20-1982	Pall et al.	
	3	US-4,489,671	12-25-1984	Choinski	
	4	US-4,707,265	11-17-1987	Barnes, Jr. et al.	
	5	US-5,273,657	12-28-1993	Nakashima et al.	
	6	US-5,869,174	02-09-1999	Wang	
	7	US-5,906,742	05-25-1999	Wang et al.	
	8	US-5,958,989	09-28-1999	Wang et al.	
	9	US-6,090,441	07-18-2000	Vining, Jr. et al.	
	10	US-6,110,369	08-29-2000	Ditter et al.	
	11	US-6,277,281	08-21-2001	Ditter et al.	
	12	US-6,497,752	12-24-2002	Kessler et al.	
	13	US-6,440,306 B1	08-27-2002	Ditter et al.	
	14	US-6,513,666 B2	02-04-2003	Meyering et al.	
	15	US-6,536,605 B2	03-25-2003	Rice et al.	
	16	US-6,565,782 B1	05-20-2003	Wang et al.	
	17	US-6,736,912 B1	05-18-2004	Fields et al.	
	18	US-6,939,468 B2	09-06-2005	Wang et al.	
	19	US-2,806,256	09-17-1957	Smith-Johannsen	
	20	US-3,347,391	10-17-1967	Steensen	
	21	US-4,983,288	01-08-1991	Karbachsch et al.	
	22	US-5,240,615	08-31-1993	Fishman	
	23	US-5,886,059	03-23-1999	Wang	
	24	US-5,979,670	11-09-1999	Ditter et al.	
	25	US-6,464,084 B2	10-15-2002	Pulck	
	26	US-2003/0209485 A1	11-13-2003	Kools	
	27	US-2003/0217965 A1	11-27-2003	Kools	
	28	US-2005/0040100 A1	02-24-2005	Kools	
	29	US-2006/0086657 A1	04-27-2006	Kools	

FOREIGN PATENT DOCUMENTS							
Examiner Initials*	Cite No. ¹	Foreign Patent Document		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³	Number ⁴ <i>(if known)</i>				
	30	JP	56-91815	07-25-1981	Toyo Soda MFG Co. Ltd.		X
	31	JP	60-76323	04-30-1985	Dainippon Printing Co. Ltd		X
	32	JP	60-132605	07-15-1985	Sanyo Chem. Ind. Ltd.		X
	33	JP	62-11617	08-02-1994	Meiji Seika Kaisha et al.		X
	34	JP	09-24260	01-28-1997	Dainippon Ink & Chemical, Inc.		X
	35	WO	94/09880	05-11-1994	Cuno Incorporated		
	36	WO	98/30379	07-16-1998	Weigel et al.		X

Examiner Signature		Date Considered	
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

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Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Complete if Known	
				Application Number	10/635,736
				Filing Date	August 6, 2003
				First Named Inventor	Willem Kools
				Art Unit	1723
				Examiner Name	To Be Assigned
Sheet	2	of	2	Attorney Docket Number	2089/102 (MCA-517)

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	37	SCHENKEL, "Plastics Extrusion Technology and Theory," Iliffe Books Ltd., London, published by American Elsevier Publishing Company Inc., New York, pp. 336-337 (1967)	

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¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

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¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

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	11	Cohen, "Two-Layer Slot Coating: Flow Visualization and Modelling," Thesis, University of Minnesota, December 1993	
	12	Gröbe et al., "Ein neues Prinzip für die Herstellung von asymmetrischen Polymermembranen," <i>Acta Polymerica</i> 30:62-63 (1979)	X
	13	Gröbe et al., "Multilayer Membranes I. A New Type of Asymmetric Synthetic Membranes," <i>Synthetic Polymeric Membranes</i> , Ed. B. Sedlacek, J. Kahovec, Walter Gruyter & Co., Berlin, (1987)	
	14	Hiatt et al., "Microporous Membranes Via Upper Critical Temperature Phase Separation," <i>Materials Science of Synthetic Membranes</i> , ed., D.R. Lloyd, American Chemical Society, Washington, D.C. (1985), p. 229-244.	
	15	Taylor, "Two-Layer Slot Coating: Study of Die Geometry and Interfacial Region," Thesis, McMaster University, July 1997	
	16	Taylor et al., "Visualization and Flow Simulation of a Two-Layer Slot Coater," <i>Chemical Engineering Science</i> 54:909-918 (1999)	
	17	Weigel et al., "Bikomponentenmembranen II. Herstellung von Bikomponentenmembranen unter Einsatz einer Bikomponentenbreitschlitzdüse," <i>Acta Polymerica</i> 40:734-740 (1989)	X
	18	Weigel et al., "Bikomponentenmembranen III. Diffusion und Strukturbildung bei der Koagulation von Polymerlösungen unter Einsatz einer Bikomponentenbreitschlitzdüse," <i>Acta Polymerica</i> 41:124-131 (1990)	X
	19	Weigel et al., "Bicomponent membranes. IV. Influence of Membrane Formation Principles on the Structure of the Active Layer of Membranes," <i>Acta Polymerica</i> 42:366-371 (1991)	

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